

**Notice of Allowability**

Application No.

09/938,039

Examiner

Marc S. Zimmer

Applicant(s)

TERRY ET AL.

Art Unit

1712

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 05/24/05 and the interview conducted on June 14, 2005.
2. ☒ The allowed claim(s) is/are 1-11, 13-23, 38, 39 and 41-52.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

**EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Doug Sorocco on June 14, 2005.

The application has been amended as follows:

In claim 38, please insert the phrase,

-- wherein the disilane is represented by the formula  $(R^{10}O)_x R^{11}_{3-x} Si-R^{12}_y SiR^{13}_{3-x} (OR^{14})_x$ , where x is 0, 1, 2 or 3 and y is 0 or 1,  $R^{11}$  and  $R^{13}$  are H or an alkyl group containing from about 1 to 10 carbon atoms, a functionalized alkyl group, an alkylene group, an aryl group, an alkylpolyether group and combinations thereof,  $R^{10}$  and  $R^{14}$  are H, an alkyl group containing from about 1 to 10 carbon atoms, an acetyl group, and combinations thereof, wherein if y is 1 then  $R^{12}$  can be an alkylene group containing from about 1 to 12 carbon atoms, an alkylpolyether containing from about 1 to 12 carbon atoms, an aryl group, an alkylene substituted aryl group, an alkylene group which may contain one or more olefins, or an oxygen or sulfur atom, and further wherein if x = 0, then  $R^{11}$  and  $R^{13}$  are a chlorine or bromine atom, and --

Art Unit: 1712

after recitation of the "carboxylic acid functional compound" and before the phrase "wherein the carboxylic acid functional compound is selected..." in lines 6 and 7 of the claim.

In claim 39, please insert the phrase,

-- and wherein the disilane is represented by the formula  $(R^{10}O)_x R^{11}_{3-x} Si-R^{12}_y-SiR^{13}_{3-x} (OR^{14})_x$ , where x is 0, 1, 2 or 3 and y is 0 or 1,  $R^{11}$  and  $R^{13}$  are H or an alkyl group containing from about 1 to 10 carbon atoms, a functionalized alkyl group, an alkylene group, an aryl group, an alkylpolyether group and combinations thereof,  $R^{10}$  and  $R^{14}$  are H, an alkyl group containing from about 1 to 10 carbon atoms, an acetyl group, and combinations thereof, wherein if y is 1 then  $R^{12}$  can be an alkylene group containing from about 1 to 12 carbon atoms, an alkylene polyether containing from about 1 to 12 carbon atoms, an aryl group, an alkylene substituted aryl group, an alkylene group which may contain one or more olefins, or an oxygen or sulfur atom, and further wherein if x = 0, then  $R^{11}$  and  $R^{13}$  are a chlorine or bromine atom, and--

before the phrase "wherein the epoxy-functional silane is present...." in line 18 of the claim.

In claim 45, please insert the phrase,

Art Unit: 1712

-- and further wherein the disilane is represented by the formula  $(R^{10}O)_x R^{11}_{3-x} Si-R^{12}_y-SiR^{13}_{3-x} (OR^{14})_x$ , where x is 0, 1, 2 or 3 and y is 0 or 1,  $R^{11}$  and  $R^{13}$  are H or an alkyl group containing from about 1 to 10 carbon atoms, a functionalized alkyl group, an alkylene group, an aryl group, an alkylpolyether group and combinations thereof,  $R^{10}$  and  $R^{14}$  are H, an alkyl group containing from about 1 to 10 carbon atoms, an acetyl group, and combinations thereof, wherein if y is 1 then  $R^{12}$  can be an alkylene group containing from about 1 to 12 carbon atoms, an alkylene polyether containing from about 1 to 12 carbon atoms, an aryl group, an alkylene substituted aryl group, an alkylene group which may contain one or more olefins, or an oxygen or sulfur atom, and further wherein if x = 0, then  $R^{11}$  and  $R^{13}$  are a chlorine or bromine atom, and --

after recitation of the "carboxylic acid functional compound" and before the phrase "wherein the carboxylic acid functional compound is selected..." in lines 6 and 7 of the claim.

In claim 52, please insert the phrase,

-- wherein the disilane is represented by the formula  $(R^{10}O)_x R^{11}_{3-x} Si-R^{12}_y-SiR^{13}_{3-x} (OR^{14})_x$ , where x is 0, 1, 2 or 3 and y is 0 or 1,  $R^{11}$  and  $R^{13}$  are H or an alkyl group containing from about 1 to 10 carbon atoms, a functionalized alkyl group, an alkylene group, an aryl group, an alkylpolyether group and combinations thereof,  $R^{10}$  and  $R^{14}$  are H, an alkyl group containing from about 1 to 10 carbon atoms, an acetyl

Art Unit: 1712

group, and combinations thereof, wherein if  $y$  is 1 then  $R^{12}$  can be an alkylene group containing from about 1 to 12 carbon atoms, an alkylene polyether containing from about 1 to 12 carbon atoms, an aryl group, an alkylene substituted aryl group, an alkylene group which may contain one or more olefins, or an oxygen or sulfur atom, and further wherein if  $x = 0$ , then  $R^{11}$  and  $R^{13}$  are a chlorine or bromine atom, and--

before the phrase "wherein the carboxylic acid functional compound is selected..." in line 15.

In a correspondence dated November 8, 2002, the Examiner had indicated that, while it had been known to add colloidal silica to organosilicon-based coating composition of the variety disclosed by Applicant as a means of enhancing abrasion resistance, there was little motivation to add colloidal silica to the invention disclosed Sawaragi insofar as that composition had already been stated to provide scratch resistance. It has since been determined however that it would, nonetheless, be obvious to incorporate silica for the purpose of conveying yet more protection against marring of the substrate surface. Claims 38 and 39 specify that the silica is acidic but several documents including Tarshiani et al., U.S. Patent # 5,385,955 and White et al., U.S. Patent # 4,390,373 disclose similar inventions for a similar purpose wherein acidic colloidal silica was suggested or even preferred.

The reasons why the Examiner had originally considered claim 52 are not clear from the record. In any case, the combination of Sawaragi and Takeshita cited in an earlier stage of prosecution would indeed appear to render obvious this claim.

Original claim 1 had been amended earlier to include a description of the structural makeup of the disilane because the Examiner had indicated that Takeshita had failed to contemplate these more specific embodiments of that component. Because it seemed clear that it was these incarnations of the disilane that Applicant was most interested in using anyway, the Examiner proposed that Applicant amend the above claims to expedite the allowance of this case. (The Examiner explained that a new rejection would have to be formulated in view of the facts presented *supra* unless an amendment that avoided the art could be agreed upon. Applicant indicated that they were amenable to changes set forth in the Examiner's amendment.

With these amendments and the numerous terminal disclaimers filed by Applicant, there appears to be no further issues prohibiting the allowance of this case. Accordingly, claims 1-11, 13-23, 38, 39, and 41-52 are deemed allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

Art Unit: 1712

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 27, 2005

*Mark Zimmer*

*Mark Zimmer*  
*AV 1712*